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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/752,861	12/28/2000	Brad A. Davis	BEA9-2000-0015-US1	1468

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EXAMINER
PORTKA, GARY J

ART UNIT	PAPER NUMBER
2188	

DATE MAILED: 05/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No.	Applicant(s)
	09/752,861	DAVIS ET AL.
	Examiner	Art Unit
	Gary J Portka	2188

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 December 2000*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 April 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date *3*.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-28 are presented for examination.

Information Disclosure Statement

2.   The information disclosure statement (IDS) submitted on April 10, 2001 (paper
no. 3) was considered by the examiner.

Claim Objections

3.   Claims are objected to because of the following informalities: In claim 3 "said
primary data structure" lacks proper antecedent basis. In claim 9 the second descriptor
is stated to be selected from a group of descriptors, and in claim 12 the first descriptor is
stated to reflect average latency; however, in claim 1 it was stated that the second
descriptor is of respective performance. Have "first" and "second" in claims 9 and 12
been reversed? This also applies to claims 18 and 21, although both of these state
"second". In claim 25, "said secondary data structure" lacks proper antecedent basis.
Both in claims 25 and 26, "secondary" should probably be changed to "second".
Appropriate correction is required.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all
obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 1-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over
Elnozahy et al., US 6,701,421 B1, in view of Sayles, US 6,549,963 B1.

6.   As to claims 1, 13, 16, and 22, Elnozahy discloses a computer system, article,

and method with multiple processors and plurality of resources assigned to node

groups, wherein a first descriptor of respective topological levels of at least one

resource is produced by firmware. See Abstract, Figs. 1 and 2, col. 1 lines 41-52, col. 2

lines 17-29, col. 4 lines 6-10 and 22-26, and col. 4 line 43 to col. 5 line 4; note that BIOS

generates the configuration tables, which identifies the nodes and amount of memory,

and thus the topological levels as recited. Elnozahy does not teach that the firmware

also produces a second descriptor of the respective performance of the resources.

However, Sayles teaches the use of firmware to initialize configuration settings that

control performance as well as other characteristics of multiple devices attached to a

network, thus reading on the second descriptor (see Sayles col. 1 lines 51-56, col. 2

lines 26-33, col. 2 line 55 to col. 3 line 26, and col. 5 lines 13-22 and 35-42). An artisan

would have been motivated to add the second descriptor produced by firmware in the

system of Elnozahy because it would have provided the advantages of control over

multi-device networks to maintain signal integrity, and also the ability to change

characteristics for testing purposes. Thus it would have been obvious to one of

ordinary skill in the art at the time of the invention to add the second descriptor

produced by firmware, because it was a known method to control signal integrity and

allow testing under changing characteristics.

7.   As to claim 2, the descriptors taught as described above may be considered first

level and primary to the extent recited.

8.   As to claim 3, since the configuration table in Elnozahy maps addresses it

contains a pointer to a secondary data structure.

9.   As to claims 4 and 17, each node has an identifier in Elnozahy.

10.   As to claim 5, the identifiers represent multiple interconnect levels as recited

since a node may have multiple levels (for example, processor and memory).

11.   As to claims 6-7, Elnozahy dynamically updates the descriptor as recited since

the HAL modifies the BIOS generated configuration.

12.   As to claim 8, Sayles dynamically updates the other descriptor as recited (see

col. 5 lines 65-66).

13.   As to claims 9, 18, and 25, the descriptor of the prior art combination is selected

from a group that includes descriptors of the recited elements.

14.   As to claims 10 and 19, since the descriptors of Elnozahy describe the hardware

at each node, the interconnects are reflected as recited.

15.   As to claims 11, 20, and 26, the descriptor of Sayles may be considered part of

the recited elements of the other descriptor in the combination, that of Sayles

incorporating the latency as recited.

16.   As to claims 12, 21, and 27, since transfer rates are given by Sayles, the average

latency which is directly calculable from this is reflected or maintained as recited.

17.   As to claims 14 and 15, the medium consists of both recordable storage and

modulated carrier.

18.   As to claim 23, traversing the data structure must be done in Elnozahy to use the

configuration table to identify nodes and hardware therein.

19.   As to claim 24, accessing a second data structure is disclosed in Elnozahy since
the configuration table maps addresses.

20.   As to claim 28, recursively accessing additional data structure levels is inherent
to the extent recited since data is accessed at processor and memory levels.

Conclusion

21.   The prior art made of record and not relied upon is considered pertinent to
applicant's disclosure.

Patent No:

6,604,060 B1   Determination of CC-NUMA intra-processor delays.

6,542,926 B2   Performance aware firmware configuration of multi-

processor.

22.   Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Gary J Portka whose telephone number is (703) 305-
4033. The examiner can normally be reached on M-F 9:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Mano Padmanabhan can be reached on (703) 306-2903. The fax phone
number for the organization where this application or proceeding is assigned is 703-
872-9306.

Information regarding the status of an application may be obtained from the

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published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Gary J Portka
Primary Examiner
Art Unit 2188

May 17, 2004